

## ABSTRACT OF THE DISCLOSURE

2 *Sur A7* The various functions that are desirable for interior test memory within a memory tester are  
4 implemented in Memory Sets each serving as the host for one or sometimes more of such functions.  
6 Because of its size and the desirability of dedicated high speed data paths, an ECR might require an entire  
8 Memory Set of its own. An entire collection of Tag RAM's can be located in another Memory Set. If  
10 needed, buffer memories could be located in still a different Memory set. A collection of Tag RAM's  
12 might not need the entire width of the native word implemented by the Memory Set, and yet might exhibit  
14 the same range of addresses. Tag RAM's can be located side-by-side at the same addresses by taking  
16 advantage of a narrow word feature. The same economy can be achieved for buffer memories. Even  
18 though these different uses of interior test memory within a Memory Set are actually located at arbitrary  
20 locations within the address space of that Memory Set, it is desirable that as far as the algorithmic  
22 processes within the test program are concerned, they appear to be addressed by addresses the same as, or derived-by-architecture from, addresses applied to the DUT. This is arranged by augmenting the address classification mechanisms for the different Memory Sets to, under the control of the test program, automatically and dynamically vary the address classification process as corresponding parts of testing are performed, so as to steer Tag RAM (or ECR or Buffer Memory) results into the correct location in the Memory Set of interest. For certain classes of testing a portion of interior test memory can be used as a Stimulus Log RAM that operates as an ideal DUT to create the correct conditions that are to exist in an actual DUT after testing. The actual part can then be tested, while the expected receive vectors are taken from the Stimulus Log RAM, and the comparison results sent to an ECR, Tag RAM's, etc., as usual. In this way the test program does not have to create or contain within itself the particular receive vectors that are the expected response from the applied stimulus.